AMENDMENTS TO THE CLAIMS

Please amend the claims as indicated hereafter (where underlining "_" denotes additions and strikethrough "-" denotes deletions).

Claims:

1.   (Canceled).

2.   (Currently Amended) A method for defining a path through an overall network for communications service between a unit and a service provider, comprising:

storing a topology of an overall network including elements and at least one link among the elements;

receiving a service order for provision of the communications service between the unit and the service provider; and

using information from the service order with the topology to select particular elements from the elements of the overall network and to select at least one particular link between the particular elements as the path for the communications service through the overall network,

wherein the overall network comprises at least a first type of network and a second type of network;

wherein the overall network comprises a digital subscriber line (DSL) network or an asynchronous digital subscriber line (ADSL) network;

wherein using the information from the service order with the topology comprises using the information to select a particular element from the DSL network or the ADSL network as a part of the path for the communications service through the overall network;

wherein the digital subscriber line (DSL) network or the asynchronous digital subscriber line (ADSL) network comprises a digital subscriber line access multiplexer (DSLAM); and

wherein using the information to select the particular element from the DSL network or the ADSL network comprises using the information to select the DSLAM as the part of the path; and

wherein the digital subscriber line (DSL) network of the asynchronous digital subscriber line (ADSL) network comprises a mini-ram (MR).

3.   (Previously Presented) The method of Claim 2, wherein using the information from the service order with the topology comprises mapping the information from the service order onto the topology.

4.   (Previously Presented) The method of Claim 2 wherein the path comprises a permanent virtual circuit (PVC).

5.   (Previously Presented) The method of Claim 2, further comprising:
         assigning an identifier to the path.

6.   (Previously Presented) The method of Claim 5, wherein the identifier comprises a unique identifier.

7.   (Previously Presented) The method of Claim 2, further comprising:
         prior to storing the topology, creating the topology of the overall network.

8.   (Previously Presented) The method of Claim 7, wherein the overall network comprises a digital subscriber line (DSL) network or an asynchronous digital subscriber line (ADSL) network; and

         wherein creating the topology of the overall network comprises creating the topology to include the DSL network or the ADSL network.

9.   (Previously Presented) The method of Claim 7, wherein creating the topology comprises modeling the elements and modeling the links among the elements.

10.   (Previously Presented) The method of Claim 7, wherein creating the topology comprises creating the topology to include respective locations of the elements.

11.   (Previously Presented) The method of Claim 10,

wherein a location of an element comprises a building location; and

wherein creating the topology to include the respective locations of the elements comprises creating the topology to include the building location of the element.

12.   (Previously Presented) The method of Claim 11,

wherein a building location of the element comprises a common location language identifier (CLLI), a network site, and a local access and transport area (LATA) name; and

wherein creating the topology to include the building location comprises creating the topology to include the CLLI, the network site, and the LATA name.

13.   (Previously Presented) The method of Claim 7, wherein creating the topology comprises creating the topology to include respective configurations of the elements.

14.   (Previously Presented) The method of Claim 13,

wherein creating the topology to include the respective configurations of the elements comprises retrieving a configuration of an element from the element; and including the retrieved configuration of the element in the topology.

15.   (Previously Presented) The method of Claim 7, wherein creating the topology comprises creating the topology to include respective locations of the links.

16.   (Previously Presented) The method of Claim 15,

wherein a link connects at least two elements with each element having a location; and

wherein creating the topology to include the respective locations of the links comprises creating the topology to include an association among the link, the at least two elements, and each respective location of the at least two elements.

17.   (Previously Presented) The method of Claim 7, wherein creating the topology comprises creating the topology to include respective configurations of the links.

18.   (Previously Presented) The method of Claim 17, wherein a configuration of a link comprises a common location language identifier (CLLI), a circuit identifier, and a circuit type; and

wherein creating the topology to include the respective configurations of the links comprises creating the topology to include the CLLI, the circuit identifier, and the circuit type for the link.

19.   (Canceled).

20.   (Canceled).

21.   (Currently Amended) The method of Claim 2, ~~wherein the digital subscriber line (DSL) network or the asynchronous digital subscriber line (ADSL) network comprises a mini-ram (MR); and~~

wherein using the information to select the particular element from the DSL network or the ADSL network further comprises using the information to select the MR as the part of the path.

22.   (Previously Presented) The method of Claim 2, wherein the overall network comprises an asynchronous transfer mode (ATM) network; and

wherein using the information from the service order with the topology comprises using the information to select a particular element from the ATM network as a part of the path for the communications service through the overall network.

23.   (Previously Presented) The method of Claim 22, wherein the asynchronous transfer mode (ATM) network comprises an ATM switch; and

wherein using the information to select the particular element from the ATM network comprises using the information to select the ATM switch as the part of the path.

24.   (Previously Presented) The method of Claim 2, wherein the information in the service order comprises a telephone number, an identifier for the service provider, and a universal service order code (USOC); and

wherein using the information from the service order comprises using the telephone number, the identifier for the service provider, and the USOC with the topology to select the particular elements and to select the particular links as the path for the communications service.

25.   (Previously Presented) The method of Claim 24, wherein the identifier for the service provider comprises a circuit identifier for the service provider and a virtual path identifier (VPI) for the service provider.

26.   (Currently Amended) A method for defining a virtual connection through an overall network for communications service between a unit and a service provider, the overall network including a telecommunications network with a central office serving the unit, and network elements from at least a first network and a second network, the method comprising:

creating a topology of the overall network including elements and links among the elements by

including the respective building locations and configurations of the elements in the topology, a building location of an element, a network site, and a local access and transport area (LATA) name, and a configuration of the element being retrieved from the element, and

including the respective locations and configurations of the links in the topology, a link connecting at least two elements with each element having a location, and a location of the link including an association among the link, the two elements, and each respective location of the at least two elements, and a configuration of the link including a link common location language identifier, a circuit identifier, and a circuit type;

receiving a service order for provision of the communications service between the unit and the service provider with information in the service order including a telephone number, an identifier for the service provider, and a universal service order code (USOC);

mapping the information from the service order onto the topology by using the telephone number, the identifier for the service provider, and the USOC with the topology to select particular elements from the elements of the overall network

and to select particular links between the particular elements as the virtual connection for the communications service through the overall network, the virtual connection including the central office from the telecommunications network, and network elements from at least a first and second network; and

assigning a unique identifier to the virtual connection PVC;

wherein the overall network comprises a digital subscriber line (DSL) network or an asynchronous digital subscriber line (ADSL) network;

wherein using the information from the service order with the topology comprises using the information to select a particular element from the DSL network or the ADSL network as a part of the path for the communications service through the overall network;

wherein the digital subscriber line (DSL) network or the asynchronous digital subscriber line (ADSL) network comprises a digital subscriber line access multiplexer (DSLAM); and

wherein using the information to select the particular element from the DSL network or the ADSL network comprises using the information to select the DSLAM as the part of the path; and

wherein the digital subscriber line (DSL) network or the asynchronous digital subscriber line (ADSL) network comprises a mini-ram (MR).

27.	(Currently Amended) A system for defining a path through an overall network for provision of communications services between a unit and a service provider, comprising:

a topology of elements and links linking the elements of the overall network;

information about the unit and about the communications services to the unit; and

a mapper for mapping the information onto the topology to obtain particular elements from the elements of the overall network and to obtain

particular links between the particular elements from the links linking the elements of the overall network,

whereby the particular elements and the particular links between the particular elements constitute the path for communications services between the unit and the service provider; ~~and~~

wherein the overall network comprises a first type of network and a second type of network;

wherein the overall network comprises a digital subscriber line (DSL) network or an asynchronous digital subscriber line (ADSL) network;

wherein using the information from the service order with the topology comprises using the information to select a particular element from the DSL network or the ADSL network as a part of the path for the communications service through the overall network;

wherein the digital subscriber line (DSL) network or the asynchronous digital subscriber line (ADSL) network comprises a digital subscriber line access multiplexer (DSLAM); ~~and~~

wherein using the information to select the particular element from the DSL network or the ADSL network comprises using the information to select the DSLAM as the part of the path; and

wherein the overall network comprises a digital subscriber line (DSL) network or an asynchronous digital subscriber line (ADSL) network including a digital subscriber line access multiplexer (DSLAM) and a mini-ram (MR).

28.   (Previously Presented) The system of Claim 27, wherein the path comprises a permanent virtual circuit (PVC).

29.   (Previously Presented) The system of Claim 27, wherein the path comprises an identifier.

30.　(Previously Presented)　The system of Claim 29, wherein the identifier comprises a unique identifier.

31.　(Currently Amended)　The system of Claim 27, ~~wherein the overall network comprises a digital subscriber-line (DSL) network or an asynchronous digital subscriber-line (ADSL) network including a digital subscriber-line access multiplexer (DSLAM) and a mini-ram (MR);~~

　　　　wherein the topology of the elements comprises the DSLAM and the MR; and

　　　　wherein the particular elements comprise the DSLAM and the MR so the DSLAM and the MR are included in the path.

32.　(Previously Presented)　The system of Claim 27, wherein the overall network comprises an asynchronous transfer mode (ATM) network including an ATM switch;

　　　　wherein the topology of the elements comprises the ATM switch; and

　　　　wherein the particular elements comprise the ATM switch so the ATM switch is included in the path.

33.　(Previously Presented)　The system of Claim 27, wherein the overall network comprises a telecommunications network including a central office serving the unit;

　　　　wherein the topology comprises the central office; and

　　　　wherein the particular elements comprise the central office so the central office is included in the path.

34.　(Previously Presented)　The system of Claim 27, wherein the topology comprises respective locations of the elements.

35.   (Previously Presented) The system of Claim 27, wherein a location of an element comprises a building location; and

wherein the topology comprises the building location of the element.

36.   (Previously Presented) The system of Claim 35, wherein the building location of the element comprises a common location language identifier (CLLI), a network site, and a local access and transport area (LATA) name.

37.   (Previously Presented) The system of Claim 27, wherein the topology comprises respective configurations of the elements.

38.   (Previously Presented) The system of Claim 37, wherein a configuration of an element is retrieved from the element and the retrieved configuration of the elements is included in the topology.

39.   (Previously Presented) The method of Claim 27, wherein the topology comprises respective locations of the links.

40.   (Previously Presented) The method of Claim 39, wherein a link connects at least two elements with each element having a location; and

wherein the topology comprises an association among the link, the at least two elements, and each respective location of the two elements.

41.   (Previously Presented) The method of Claim 27, wherein creating the topology comprises creating the topology to include respective configurations of the links.

42.   (Previously Presented) The method of Claim 41, wherein a configuration of a link comprises a common location language identifier (CLLI), a circuit identifier, and a circuit type.

43.   (Previously Presented) The method of Claim 27, wherein the information in the service order comprises a telephone number, an identifier for the service provider, and a universal service order code (USOC).

44.   (Previously Presented) The method of Claim 43, wherein the identifier for the service provider comprises a circuit identifier for the service provider and a virtual path identifier (VPI) for the service provider.

45.   (Currently Amended) A system for defining a virtual connection through an overall network for communications services between a unit and a service provider, the overall network including a telecommunications network with a central office serving the unit, the overall network also including network elements from at least a first type of network and a second type of network, the system comprising:

a topology of elements and links linking the elements of the overall network; the topology including respective locations and configurations of the elements and of the links,

a location of an element comprising a building location, a network site, and a local access and transport area (LATA) name, and

a configuration of an element being retrieved from the element,

a link connecting at least two elements with each element having a location with the topology including an association among the link, the at least two elements, and each respective location of the two elements, and

a configuration of a link comprising a location identifier, a circuit identifier, and a circuit type;

the topology including the central office and network elements from at least a first type of network and a second type of network;

information about the unit and about the communications services to the unit with the information comprising a telephone number, a circuit identifier for the service provider, a virtual connection identifier for the service provider, and a universal service order code; and

a mapper for mapping the information onto the topology to obtain particular elements from the elements of the overall and network elements from at least a first type of network and a second type of network,

whereby the particular elements and the particular links between the particular elements constitute the virtual connection for communications services between the unit and the service provider, and with the virtual connection having a unique identifier;

wherein the overall network comprises a digital subscriber line (DSL) network or an asynchronous digital subscriber line (ADSL) network;

wherein using the information from the service order with the topology comprises using the information to select a particular element from the DSL network or the ADSL network as a part of the path for the communications service through the overall network;

wherein the digital subscriber line (DSL) network or the asynchronous digital subscriber line (ADSL) network comprises a digital subscriber line access multiplexer (DSLAM); and

wherein using the information to select the particular element from the DSL network or the ADSL network comprises using the information to select the DSLAM as the part of the path; and

wherein the overall network comprises a digital subscriber line (DSL) network or an asynchronous digital subscriber line (ADSL) network including a digital subscriber line access multiplexer (DSLAM) and a mini-ram (MR)

46.   (Currently Amended) Computer readable medium for performing a
method for defining a path through an overall network for communications service
between a unit and a service provider, comprising:

logic for storing a topology of an overall network including elements and
at least one link among the elements;

logic for receiving a service order for provision of the communications
service between the unit and the service provider; and

logic for using information from the service order with the topology to
select particular elements from the elements of the overall network and to select at
least one particular link between the particular elements as the path for the
communications service through the overall network;

wherein the overall network comprises at least a first type of network and
a second type of network;

wherein the overall network comprises a digital subscriber line (DSL)
network or an asynchronous digital subscriber line (ADSL) network;

wherein using the information from the service order with the topology
comprises using the information to select a particular element from the DSL
network or the ADSL network as a part of the path for the communications
service through the overall network;

wherein the digital subscriber line (DSL) network or the asynchronous
digital subscriber line (ADSL) network comprises a digital subscriber line access
multiplexer (DSLAM); and

wherein using the information to select the particular element from the
DSL network or the ADSL network comprises using the information to select the
DSLAM as the part of the path; and

wherein the overall network comprises a digital subscriber line (DSL)
network or an asynchronous digital subscriber line (ADSL) network including a
digital subscriber line access multiplexer (DSLAM) and a mini-ram (MR)